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# The Impact of Smoking Risk Factors During Pandemic COVID-19

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## Abstract

**Background:** Based on world health organization, the smoking is a reason of death five–six cases per annum. Aims and Objectives: The aim of the study was to assess the age, marital, education, employment, smoking and social statuses on gender in Bahrain population.

**Materials and Methods:** A cross-sectional, two group: male and female comparative by using questionnaire distributed randomly and collected data to be analyzed via SPSS program.

**Results:** In age status, the female found to be below 30 years whereas the male is above 30 years. In marital status, the single, divorced and widow female found to be more in whereas the married male is more than married female. In education status, the Primary, intermediate and secondary male student found to be more whereas the college female student is more. In employment status, the Employed and Retired status found to be more in male whereas the Employment scholarship program, unemployed and Housewife found to be more in female. In Smoke status, the Smoking duration found to be more in female below 10 years whereas the Smoking duration found to be more male above 10 years. Also, the female Smoker consume found to be more below 20 cigarettes whereas male Smoker consume found to be more above 20 cigarettes.

**Conclusion**: most smokers in both are between 21 to 30 years, college students and employees. Therefore, there are serious age, education and employment phase in both gender life

**Keywords:** Smoking; Age; Marital; Education; Employment; Smoking; COVID19

## 1. Introduction

Historically, the smoking is highly associated with many types of cancers involving in many organs leading to the death [1]. The smoking is considering one of the main reason behind chronic disease such coronary heart disease and chronic obstructive pulmonary disease [2,3]. Cigarette smoking most common reason of morbidity and mortality (CDC, 2014) [4]. As the as SARS Corona virus 2 (Covid19) started in Wuhan in 2019 and become pandemic infection diseases in 2020 affected mainly human respiratory and cardiovascular system classified by world health organization into the top 10

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causes of death accounted for 55% of the 55.4 million deaths worldwide (WHO, Center for Infectious Disease Research and Policy) [5]. Therefore, the smoking is high risk in covid19 crisis. The current study investigates the risk of smoking on both gender according to different status factors.

## 2. Material and methods

In current study, it compares several factors effects on male and female. It compares the age, marital, education, employment, smoking and social statuses on both genders. The data were collected from Bahraini population. The questionnaires are distributed randomly considering age, gender, education, marital, Employment status and smoking status. Entire data are analyzed via Statistical Package for the Social Sciences (SPSS). The study was done after Ethical approval granted from approval committee and permission from the management of the shops and their clients in which questionnaires were collected under rules and regulations of Bahrain.

## 3. Result

The study investigates several factors to estimate the high risk of smoking which are Age status, Marital status, Education status, Employment status, Social status and Smoke status. In age status, the female is more than male below 30 years whereas the male is more than female above 30 years. In both gender, the highest age group in smokers found to be between 21 to 30 years. In marital status, the single, divorced and widow female is more than male whereas the married male is more than female. However, the highest marital status group in smokers found to be in single and married in female and male respectively. In education status, the Primary, intermediate and secondary male student is more than female whereas the college female student is more than male. However, the highest education status group in smokers found to be in college students. In employment status, the Employed and Retired status found to be more in male than female whereas the Employment scholarship program, Unemployed and Housewife found to be more in female than male. However, the highest employment status group in smokers found to be employee. In Smoke status, the Smoking duration found to be more in female than male which is below 10 years whereas the Smoking duration found to be more male than female which is above 10 years. Also, the female Smoker consume below 20 cigarettes found to be more than male whereas male Smoker consume above 20 cigarettes found to be more than female. In social status, the company of fiends found to be more in male than female (Table 1).

**Table 1** Comparison study of smoking gender in relation to risk factors

| Gender and factors | Male (%) | Female (%) |
|---|---|---|
| **Age status** | | |
| Less than 20 | 13.8 | 16.0 |
| 21 to 30 | 45.8 | 61.6 |
| 31 to 40 | 21.9 | 12.8 |
| More than 40 | 18.5 | 9.6 |
| **Marital status** | | |
| single | 46.7 | 50.4 |
| married | 47.1 | 38.4 |
| divorced | 5.8 | 9.6 |
| widow | .4 | 1.6 |
| **Education status** | | |
| primary | 3.1 | .8 |
| intermediate | 1.9 | .8 |
| secondary | 21.5 | 20.0 |
| collage | 73.5 | 78.3 |
| Employment status | | |
| Employment scholarship program | 24.2 | 32.2 |
| Employed | 58.2 | 47.1 |
| Unemployed | 5.1 | 8.3 |

| | | |
|---|---|---|
| Houseparent (housewife or father) | 6.6 | 9.9 |
| Retired | 5.9 | 2.5 |
| **Smoke status** | | |
| **Smoking duration** | | |
| less than 5 years | 30.3 | 55.6 |
| 5 to 10 years | 16.2 | 22.2 |
| more than 10 years | 53.5 | 22.2 |
| **Cigarette number** | | |
| 10 cigarettes or less | 40.6 | 44.4 |
| 11 - 19 | 32.9 | 44.4 |
| more than 20 | 26.6 | 11.1 |
| **Social status** | | |
| Friend | 33.5 | 12.8 |

## 4. Discussion

In history, the smoking is the most common cause of coronary heart disease and chronic obstructive pulmonary disease [2,3]. In 2019, the corona virus started in Wuhan becoming pandemic infection in 2020 affected invading heart and lung. With Covid19 crisis, the smokers become highly susceptible to infection and increase the mortality (WHO) [6,7]. Finney Rutten et al [8] stated several factors affecting the smoke such as sociodemographic, smoking status, and geographic patterns. Nicotine as well as marital status [9,10] and education status [11]. The current study investigates the risk of smoking on male and female gender in different statuses.

The incidence of smoking between males and females is quite variable in different countries [12]. On series research investigates the incidence of smoking in Argentina, Canada, Germany, Korea, America and Thailand population considering male and female [11, 13, 14, 15, 16, 17). The incidence of smoking in female smokers found to be more than male in Argentina, Canada and America. On the other hand, the incidence of smoking found to be more male than female in Germany, Korea and Thailand [15, 16, 17] as well as on current study (Figure 1).

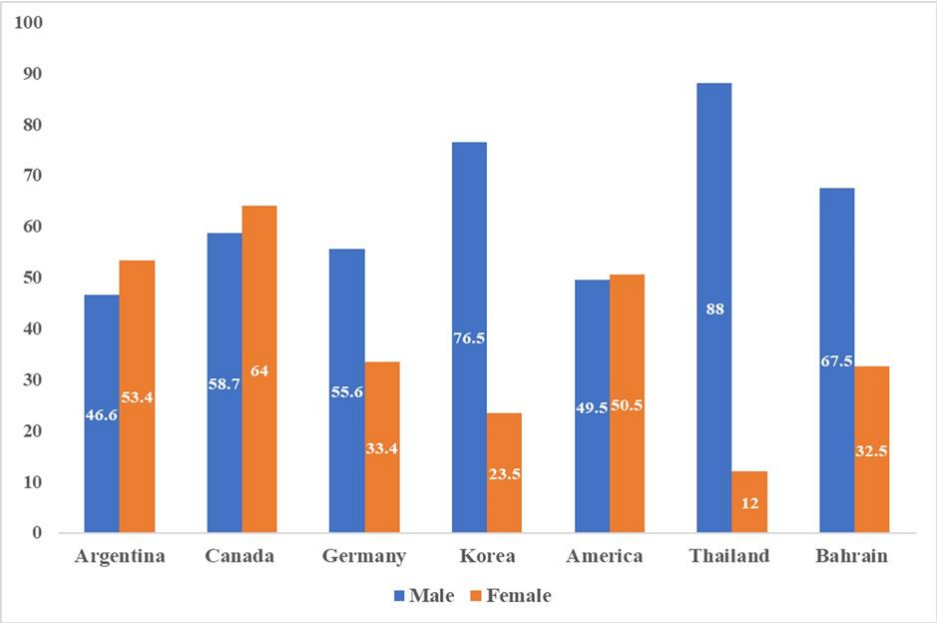

**Figure 1** Comparison of gender smoker in different population

Moreover, on series researches study the age status on smokers in Germany and Korea to identify the relation [14, 15]. Most smokers found be above 40 years in Germany and Korea in 59.9% and 29% respectively [14, 15] whereas current study found the majority between 20 and 30 years in 50.9%.

The smoking is effected by marital status [9, 10]. On series researches study the marital status on smokers found to be majority of smokers are married in Argentina, Korea and America [11, 16, 18] whereas the current study found to be more in single smoker while the married status found to be the second highest smokers (Figure 2).

Further, the majority of smoker found to be in secondary school student in Argentina in 24.9% [11] however the college student found to be 24.4%. In current study, the majority of smoker found to be in college student in 75% however secondary school student found to be in 21% in Bahrain. In comparison of gender, the college are the first highest student group in 73.5% and 78.3% and the second highest secondary school in 21.5% and 20% in male and female correspondingly.

The employee status is linked with smoking [19] in which series researches identified the employment status on in relation to smokers [11, 20]. In Argentina, the majority of smoker found to be in employed in 55.6% [11] as well as in current study in 54.6% (58.2% male and 47.1% female) in Bahrain.

Finally, the smoker status such as consuming less than 20 cigarettes per day found to be more in female in Germany [14] as well as in current study. However, the female German smoker found to be more consuming more than 20 cigarettes too whereas the current study found to be male are more consumer than female.

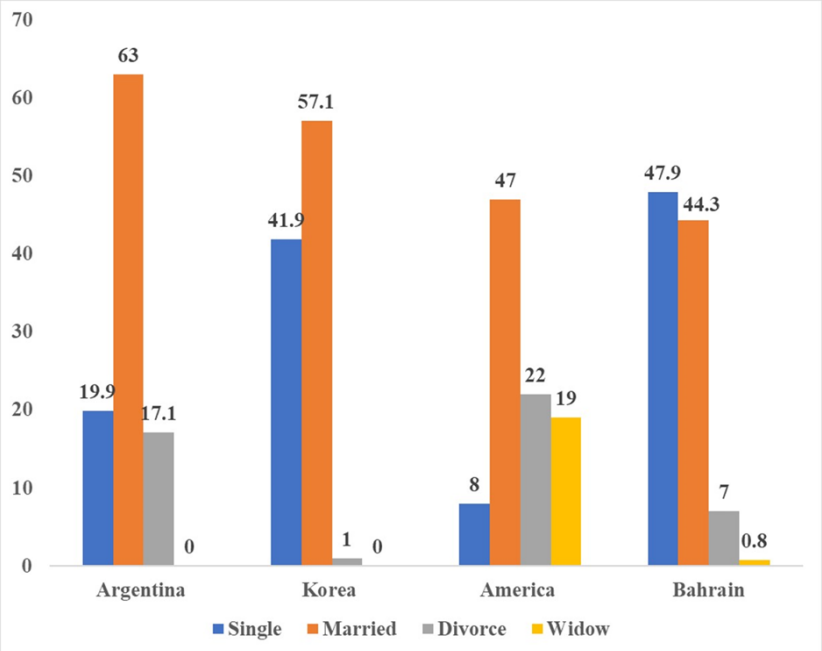


**Figure 2** Comparison of different marital status in different population

## 5. Conclusion

Most smokers in both are between 21 to 30 years, college students and employees. The variability of incidences in different factors may due to stress status factors occurring in diverse population. Therefore, there are serious age, education and employment phase in both gender life in Bahrain. Beside the previous risk factors, the smoking increases the incidence and consequences of COVID-19 which can be more in indoor than outdoor place.

## Compliance with ethical standards

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### *Disclosure of conflict of interest*

There is no conflict of interest.

### *Statement of informed consent*

The current research is Ethically approved and granted from approval committee and permission from the management of the shops and their clients in which questionnaires were collected under rules and regulations of Bahrain. Further, the informed consent was obtained from all individual participants included in the study.

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